

## **Mark Twain Library “Green” Features**

The Mark Twain Neighborhood Library is the first LEED-Certified Green Building in the City of Long Beach.

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System is the nationally accepted benchmark for design, construction, and operation of high performance green buildings. LEED gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

Below are some of the many highlights of the City's new, state-of-the art green library.

### **Library site**

- The library is on a major street with convenient access via public transportation.
- All contamination from earlier years has been removed from the site.
- Concrete parking lot stays cooler than darker paved surface, lowers ambient air temperatures and reduces air pollution.
- Preferred parking for carpooling visitors and bicycle racks reduce fuel use and air pollution.

### **Conserving water**

- The plants and most trees were selected for their drought tolerance.
- Mulch and drip irrigation reduce the amount of water needed for the plants
- A waterless urinal is installed in the men's restroom. (A waterless urinal can save up to 45,000 gallons of water per year.)
- Low flow water faucets have sensors so that they remain on only when in use.
- “Stormceptors” filter water that drains to the ocean.

### **Conserving energy**

Nationally, buildings use 37 percent of the energy and 68 percent of the electricity produced in the United States each year. The Mark Twain Library uses 27.33 percent less energy than a traditional library its size:

- The air conditioning system does not produce any ozone-layer damaging air pollution (no chlorofluorocarbons).

- The building is well-insulated.
- Natural heating, cooling, and lighting reduces the energy used.
- Energy-efficient direct/indirect lighting fixtures reduce energy use.
- Double paned glass windows control the temperature and reduce the need for heating and air conditioning.

## **Recycling**

- During construction, 83 percent of the waste materials were recovered for recycling.
- At least 10 percent of the library's building materials come from recycled products, including: ceiling tiles (newspaper); column tiles (glass); counter tops; carpet tiles (used carpet); and the flooring in the Storytelling Theater.
- The library encourages recycling by providing recycling bins throughout the building.

## **Sustainable building**

- 100 percent of all wood-based materials were from forests that are managed to ensure long-term health and production of timber, as well as animal habitat and water supplies.

## **Daylighting**

The library was designed to have natural light reach as far inside as possible, while controlling the heat. This is accomplished through:

- Shades that can be lowered when the sun is brightest.
- Light colored walls that reflect the natural light.
- The way the library is placed on the site and the placement of windows.
- Metal fins that shield the windows from direct sunlight during the hottest part of the day, and reduce glare.
- Windows with views to the landscaping provide a connection to the outdoors.

## **Indoor Air Quality**

- The Mark Twain Library is a smoke-free building.
- Automatic sensors and controls maintain the proper temperature and humidity.
- "Sniffer" sensors check for odors that are irritating or harmful, such as of benzene, propane, and methane.
- Monitors ensure that there is an adequate air flow.

### **Green Building certification**

- The Mark Twain Library is expected to receive a “Silver” rating from the U. S. Green Building Council for “Leadership in Energy and Environmental Design” (LEED).
- Only environmentally friendly products will be used to clean the library.

### **Educational innovations**

- The Mark Twain Library is the first public “green building” in Long Beach. It is a model for future public buildings that are safe and healthy for people and that protect the environment.
- The “Green Screen” in the lobby provides information about the features of the green library. Students who visit the library will be able to learn about protecting their environment, too.